

RESPONSE

In view of the following remarks, the Examiner is respectfully requested to withdraw the rejections and allow Claims 1-11, 14-18, 25-31, and 33, as well as new Claims 40-56, the only claims pending and currently under examination in this application.

Formal Matters

Claims 1-11, 14-18, 25-31, 33, and 40-56 are pending after entry of the amendments set forth herein

Claims 12-13, 19-24, 32, and 34-39 have been canceled.

Claims 1-11, 14-18, 25-31, and 33 were examined. Claims 1-11, 14-18, 25-31, and 33 were rejected. No claims were allowed.

Claims 1-6, 8-9, 11, 15-18, and 26-29 have been amended. Support for the amendments can be found in the claims as originally filed and throughout the specification at, for example: Claim 1: original Claim 33, page 7, paragraph [0027], page 10, paragraph [0045], and paragraph [0071], bridging pages 22 and 23; Claim 2: page 26, paragraph [0078]; Claim 3: page 27, paragraph [0081]; Claim 4: page 27, paragraph [0081]; Claim 5: page 27, paragraph [0083]; Claim 6: page 27, paragraph [0083]; Claim 8: page 27, paragraph [0083]; Claim 9: page 28, paragraph [0084]; Claim 11: page 27, paragraph [0083]; page 28, paragraph [0084]; Claim 15: page 28, paragraph [0084]; Claim 16: page 35, paragraph [0099]; Claim 17: page 35, paragraph [0099]; Claim 18: page 39, paragraph [00112]; Claim 25: page 40, paragraph [00114]; Claim 26: page 28, paragraph [0084]; Claim 27: page 39, paragraph [00109]; Claim 28: page 36, paragraph [00100]; and Claim 29: page 13, paragraph [0050].

New Claims 40-56 have been added. Support for the claims can be found in the claims as originally filed and throughout the specification at, for example: Claim 40: original Claim 15 and paragraph [0084] bridging pages 28 and 29; Claim 41: original Claims 1, 3, 33, page 7, paragraph [0027], and page 27, paragraph [0083]; Claim 42: original Claim 4; Claim 43: original Claim 5; Claim 44: original Claim 6; Claim 45: original Claim 7; Claim 46: original Claim 8; Claim 47: original Claim 9; Claim 48: original Claim 10; Claim 49: original Claim 11; Claim 50: original Claim 14; Claim 51: original Claim 15; Claim 52: original Claim 15 and paragraph [0084] bridging pages 28

and 29; Claim 53: original Claims 1, 16, 33, and page 7, paragraph [0027]; Claim 54: original Claim 17, page 35, paragraph [0099]; Claim 55: original Claim 18, page 39, paragraph [00112]; Claim 56: original Claim 25, page 40, paragraph [00114].

As the above amendments introduce no new matter to the application, their entry is respectfully requested.

Rejection under 35 U.S.C. §112, second paragraph

Claims 1-11, 14-18, 25-31 and 33 have been rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter regarded as the invention. In view of the amendments to the claims and the remarks made herein, this rejection is respectfully traversed as applied and as it may be applied to the pending claims.

Use of "/" in the claims (Office Action, page 3)

The Office Action has rejected the claims for use of a "/" (slash). In particular, the use of the slash with respect to "backing element/microarray assembly" (in, for example, claim 1) and "UV/O₂" (in, for example, claim 29). The Office Action asserts "it can be uncertain if it is intended to mean the limitations separated by the slash are alternatives, used together, used in sequence, etc, i.e. it can mean 'or', and 'and' or and/or', hence may be considered ambiguous" (Office Action, page 3).

With respect to use of a slash in "backing element/microarray assembly", in the spirit of expediting prosecution and providing clarity to the claims without conceding to the correctness of the rejection, the claims have been amended to recite "a backing element comprising a gasket for forming a sealed array assay chamber when joined to a microarray substrate". Support for the amendment can be found in the specification, at for example, page 7, paragraph [0027] and page 10, paragraph [0045].

With respect to the use of a slash in "UV/O₂" the specification provides the following:

As described in greater detail below, embodiments include contacting at least a portion of at least one member of a backing element/microarray assembly structure, e.g., a microarray backing element substrate with at

least one backing element treatment agent or the like, where such treatment agents include, but are not limited to, metals; SiO₂, solvents, e.g., aqueous and organic solvents; vapors; plasmas; gas/air mixes, e.g., flame treatments; beads, e.g., bead blasting; radiant energy, e.g., exposure to ultraviolet light with oxygen (UV/O₂)...

(specification, page 14, paragraph [0050], emphasis added).

However, in the spirit of expediting prosecution and providing clarity to the claims without conceding to the correctness of the rejection, the claims have been amended to recite "UV with O₂".

As such, in view of the amendments to the claims and remarks made above, the Applicants respectfully request that this rejection be withdrawn.

Claim 5 (Office Action, page 3)

The Office Action has rejected Claim 5 for use of the term "adversely" as being relative term that is vague and indefinite. In addition, the Office Action also rejected the claim for use of the term "array". The claim has been amended to remove the objectionable language and to clarify the claim to read "microarray assay" in place of array. Therefore, this rejection may be withdrawn.

Claim 25 (Office Action, page 4)

Claim 25 has been rejected because it is assertedly unclear where the "uncured gasket material" might be with respect to any other limitation in the claims from which it depends.

In the spirit of expediting prosecution and providing clarity to the claims without conceding to the correctness of the rejection, Claim 1 has been amended to recite "a backing element comprising a gasket for forming a sealed array assay chamber when joined to a microarray substrate". Therefore, this rejection may be withdrawn.

Claim 8 (Office Action, page 4)

Claim 8 has been rejected for use of the trademark or trade name "D4-D20". The claim has been amended to remove the objectionable language. Therefore, this rejection may be withdrawn.

Claim 11 (Office Action, page 5)

Claim 11 has been rejected for lack of clarity resulting from incorrect dependency of the claim. Claim 11 has been amended to correct the dependency. Therefore, this rejection may be withdrawn.

Claim 18 (Office Action, page 5)

Claim 18 has been rejected for lack of clarity resulting from incorrect Markush group terminology. Claim 18 has been amended to correct the terminology. Therefore, this rejection may be withdrawn.

Claim 15 (Office Action, page 6)

Claim 15 has been rejected for lack of clarity because the group "glyme" is encompassed in the claimed group "ethers". Claim 15 has been amended to correct the language. Therefore, this rejection may be withdrawn.

Claim 31 (Office Action, page 6)

Claim 31 has been rejected for lack of clarity. Claim 31 has been canceled rendering this rejection moot.

Claims 26-29 (Office Action, page 6)

Claims 26-29 have been rejected for lack of antecedent basis with respect to the term "treatment". Claims 26-29 have been amended to recite "treating". Therefore, this rejection may be withdrawn.

Objections to the Claims

Claims 11-15 and 33 have been objected to under 37 C.F.R. 1.75(c), as being in improper form for failing to further limit the subject matter of a previous claim. In view of the amendments to the claims, this objection may be withdrawn.

Claims 11-15 (Office Action, page 6)

With respect to claim 11-15, the dependency of Claim 11 has been amended to correctly depend the claim (and thus its dependent Claims 12-15) from Claim 9.

Claim 33 (Office Action, page 6)

With respect to Claim 33, the Office Action asserts that Claim 1 “has already defined the range from which ‘member’ is chosen” and that “a gasket is not one of the choices.” The applicants respectfully disagree. However, claim 33 has been canceled, rendering this rejection moot.

Rejection under 35 U.S.C. §112, first paragraph (Office Action, page 11, paragraph 14)

Claims 14-15 have been rejected under 35 U.S.C. §112, first paragraph, for allegedly failing to comply with the written description requirement. In particular, the Office Action stresses that there is no “specific suggestion or example of using aqueous and non-polar solvent in a mixture” (Office Action, page 11). As amended, the claim does not recite a mixture of an aqueous and non-polar solvent. Therefore, this rejection may be withdrawn.

Rejection under 35 U.S.C. §102

Cleaning Any Substrate (Office Action, page 8)

Claims 1, 3-4, 16 and 30-31 have been rejected under 35 U.S.C. §102(b) as allegedly being “anticipated by cleaning any substrate surface that is later to have something placed in it, written on it, etc, (a paper, a board, a circuit board, a plastic film, a glass slide, etc., by blowing dust or particulate matter or contaminates off the surface” (Office Action, page 8). However, the Applicants respectfully disagree.

The currently amended claims are directed to a method for treating a **backing element comprising a gasket for forming a sealed array assay chamber when joined to a microarray substrate** by either (1) depositing a component on the gasket; (2) extracting a component from the gasket; or (3) surface modifying the gasket to treat the gasket of the microarray structure.

The Office Action fails to establish how cleaning any substrate anticipates the claims of the application when, the recited activities do not teach that treating any member of a backing element/microarray assembly structure, much less a backing element comprising a gasket.

Therefore, since none of the methods recited in the Office Action recite modification of "a backing element comprising a gasket for forming a sealed array assay chamber when joined to a microarray substrate", the recited activities fail to anticipate the claims. Accordingly, this rejection may be withdrawn.

***Zhang et al. (U.S. Pat. No. 6,165,956) or Li et al. (U.S. Pat. No. 6,593,282)
(Office Action, page 8)***

Claims 1, 3-5, 9-11, 16 and 30-31 have been rejected under 35 U.S.C. §102(b) or (e) as allegedly being anticipated by Zhang et al. (U.S. Pat. No. 6,165,956) or Li et al. (U.S. Pat. No. 6,593,282). In view of the amendments to the claims and the remarks made herein this rejection is respectfully traversed as applied and as it may be applied to the pending claims.

As noted above, the present invention is direct to a method for treating a **backing element comprising a gasket for forming a sealed array assay chamber when joined to a microarray substrate** by either (1) depositing a component on the gasket; (2) extracting a component from the gasket; or (3) surface modifying the gasket to treat the gasket of the microarray structure.

Zhang et al. and the child Li et al., discloses a method for cleaning a semiconductor substrate. In particular, Zhang et al. and Li et al. discloses a method for

cleaning substrates after chemical mechanical polishing of copper films. Nowhere do the cited references teach a method of treating a backing element comprising a **gasket** according to the present invention.

It is well established that "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." Verdegaal Bros. v. Union Oil Co. of California, 2 USPQ 2d 1051, 1053 (Fed. Cir. 1987), cert. denied, 481 U.S. 1052 (1987). See also, Scripps Clinic and Research Foundation v. Genentech, Inc., 18 USPQ 2d 1001 (Fed. Cir. 1991).

Since Zhang et al. and Li et al. only teach a semiconductor substrate and not a backing element comprising a gasket, the cited references fails to disclose every element found in the claims of the present invention. As such, Claims 1, 3-5, 9-11, 16 and 30-31 are not anticipated under 35 U.S.C. § 102(b) or (e) by the cited references. Therefore, the Applicants respectfully request that this rejection be withdrawn.

Kondo et al. (U.S. Pat. No. 6,596,638 or 6,117,775) (Office Action, page 9)

Claims 1-4, 9-11, 16, 26 and 30-31 have been rejected under 35 U.S.C. §102(b) or (e) as allegedly being anticipated by Kondo et al. (U.S. Pat. No. 6,596,638 or 6,117,775). In view of the amendments to the claims and the remarks made herein this rejection is respectfully traversed as applied and as it may be applied to the pending claims.

Kondo et al. discloses a method of performing chemical mechanical polishing by rubbing the metal film surface of a substrate with a polishing solution comprising an oxidizer that renders the metal water soluble (column 6, lines 14-25).

In contrast, the currently amended claims are directed to a method for treating a **backing element comprising a gasket for forming a sealed array assay chamber when joined to a microarray substrate** by either (1) depositing a component on the gasket; (2) extracting a component from the gasket; or (3) surface modifying the gasket to treat the gasket of the microarray structure. Nowhere does the cited reference teach

a method of treating a backing element comprising a **gasket** according to the present invention.

Therefore, since the cited references do not to teach each end every element found in the claims, the cited references fail to anticipate the claims of the present invention. Accordingly, the Applicants respectfully request that this rejection be withdrawn.

Nguyen et al. (U.S. Pat. No. 6,733,594) (Office Action, page 9)

Claims 1, 3, 4, 9, 10, 16-17, and 30-31 have been rejected under 35 U.S.C. §102(e) as allegedly being anticipated by Nguyen et al. (U.S. Pat. No. 6,733,594). In view of the amendments to the claims and the remarks made herein this rejection is respectfully traversed as applied and as it may be applied to the pending claims.

Nguyen et al. discloses a method of processing a wafer by removing un-wanted particles from the backside of the wafer and performing a specific processing task on the process side of the wafer after cleaning the backside of the wafer (column 2, lines 58-67).

In contrast, the currently amended claims are directed to a method for treating a **backing element comprising a gasket for forming a sealed array assay chamber when joined to a microarray substrate** by either (1) depositing a component on the gasket; (2) extracting a component from the gasket; or (3) surface modifying the gasket to treat the gasket of the microarray structure. Nowhere does the cited reference teach a method of treating a backing element comprising a **gasket** according to the present invention.

Therefore, since the cited reference does not to teach each end every element found in the claims, the cited reference fails to anticipate the claims of the present invention. Accordingly, the Applicants respectfully request that this rejection be withdrawn.

Cheng et al (U.S. Pat. No. 6,743,715) (Office Action, page 10)

Claims 1-4, 9, 10, 16-18, 26, and 30-31 have been rejected under 35 U.S.C. §102(e) as allegedly being anticipated by Cheng et al. (U.S. Pat. No. 6,743,715). In view of the amendments to the claims and the remarks made herein this rejection is respectfully traversed as applied and as it may be applied to the pending claims.

Cheng et al. discloses a method of forming a gate silicide portion by sequential deposition of gate oxide layer over a substrate surface, gate layer over the oxide layer, a RPO layer over the gate layer, and a patterned photoresist layer over the RPO layer (column 1, lines 41-59, Figures 1-6).

In contrast, the currently amended claims are directed to a method for treating a backing element comprising a gasket for forming a sealed array assay chamber when joined to a microarray substrate by either (1) depositing a component on the gasket; (2) extracting a component from the gasket; or (3) surface modifying the gasket to treat the gasket of the microarray structure. Nowhere does the cited reference teach a method of treating a backing element comprising a gasket according to the present invention.

Therefore, since the cited reference does not teach each and every element found in the claims, the cited reference fails to anticipate the claims of the present invention. Accordingly, the Applicants respectfully request that this rejection be withdrawn.

Tai et al. (U.S. Pat. No. 6,656,611) (Office Action, page 10)

Claims 1, 3-4, 9, and 29-31 have been rejected under 35 U.S.C. §102(e) as allegedly being anticipated by Cheng et al. (U.S. Pat. No. 6,743,715). In view of the amendments to the claims and the remarks made herein this rejection is respectfully traversed as applied and as it may be applied to the pending claims.

Tai et al. discloses a poly-siloxane material that be used to form an insulating structure in an organic light-emitting device (OLED). In addition, the cited reference

discloses methods of making OLED by sequential deposition of electrode layers, polysiloxane layers and organic layers on a substrate surface (column 2, lines 19-63).

In contrast, the currently amended claims are directed to a method for treating a **backing element comprising a gasket for forming a sealed array assay chamber when joined to a microarray substrate** by either (1) depositing a component on the gasket; (2) extracting a component from the gasket; or (3) surface modifying the gasket to treat the gasket of the microarray structure. Nowhere does the cited reference teach a method of treating a backing element comprising a **gasket** according to the present invention.

Therefore, since the cited reference does not teach each and every element found in the claims, the cited reference fails to anticipate the claims of the present invention. Accordingly, the Applicants respectfully request that this rejection be withdrawn.

Tracy et al. (U.S. Pat. No. 5,780,118) (Office Action, page 12)

Claims 1, 16-18, 26, 27, and 30-31 have been rejected under 35 U.S.C. §102(b) as allegedly being anticipated by Tracy et al. (U.S. Pat. No. 5,780,118). In view of the amendments to the claims and the remarks made herein this rejection is respectfully traversed as applied and as it may be applied to the pending claims.

Tracy et al. discloses a method for increasing the hydrophilicity of the coating formed on a transparent substrate by either exposing the coating to a corona plasma discharge exposure to create changes in oxygen functionality at the coating surface, or exposing the surface with UV radiation and ozone exposure for controlled periods of time (column 2, lines 31-59).

In contrast, the currently amended claims are directed to a method for treating a **backing element comprising a gasket for forming a sealed array assay chamber when joined to a microarray substrate** by either (1) depositing a component on the gasket; (2) extracting a component from the gasket; or (3) surface modifying the gasket

to treat the gasket of the microarray structure. Nowhere does the cited reference teach a method of treating a backing element comprising a **gasket** according to the present invention.

Therefore, since the cited reference does not teach each and every element found in the claims, the cited reference fails to anticipate the claims of the present invention. Accordingly, the Applicants respectfully request that this rejection be withdrawn.

Frautschi et al. (U.S. Pat. Pub. No. 2004/0234703) (Office Action, page 12)

Claims 1, 3-4, 9-11, 16-18, 26-27, and 29-31 have been rejected under 35 U.S.C. §102(a) as allegedly being anticipated by Frautschi et al. (U.S. Pat. Pub. No. 2004/0234703). In view of the amendments to the claims and the remarks made herein this rejection is respectfully traversed as applied and as it may be applied to the pending claims.

Frautschi et al. discloses a method of forming a polymer tie layer on a metal surface by sequentially cleaning the metal surface with a solvent, cleaning the metal surface with oxygen plasma, sputter cleaning the metal surface with argon, functionalizing the metal surface, and depositing the tie layer by plasma deposition (page 1, paragraph [0005], Figure 1).

In contrast, the currently amended claims are directed to a method for treating a **backing element comprising a gasket for forming a sealed array assay chamber when joined to a microarray substrate** by either (1) depositing a component on the gasket; (2) extracting a component from the gasket; or (3) surface modifying the gasket to treat the gasket of the microarray structure. Nowhere does the cited reference teach a method of treating a backing element comprising a **gasket** according to the present invention.

Therefore, since the cited reference does not teach each and every element found in the claims, the cited reference fails to anticipate the claims of the present

invention. Accordingly, the Applicants respectfully request that this rejection be withdrawn.

Bernard et al. (U.S. Pat. No. 6,596,346) (Office Action, page 12)

Claims 1, 16-18, 26, 27 and 30-31 have been rejected under 35 U.S.C. §102(e) as allegedly being anticipated by Bernard et al. (U.S. Pat. No. 6,596,346). In view of the amendments to the claims and the remarks made herein this rejection is respectfully traversed as applied and as it may be applied to the pending claims.

Bernard et al. discloses a method for fabricating silicon elastomer stamps with hydrophobic surfaces by reacting the silicon bound surface with a low dose of oxygen plasma and then contacted with an aqueous solution (column 5, lines 14-34, Figure 1).

In contrast, the currently amended claims are directed to a method for treating a **backing element comprising a gasket for forming a sealed array assay chamber when joined to a microarray substrate** by either (1) depositing a component on the gasket; (2) extracting a component from the gasket; or (3) surface modifying the gasket to treat the gasket of the microarray structure. Nowhere does the cited reference teach a method of treating a backing element comprising a **gasket** according to the present invention.

Therefore, since the cited reference does not teach each and every element found in the claims, the cited reference fails to anticipate the claims of the present invention. Accordingly, the Applicants respectfully request that this rejection be withdrawn.

Omichi et al. (U.S. Pat. No. 3,849,166) (Office Action, page 12)

Claims 1, 16-18, 26, 27 and 30-31 have been rejected under 35 U.S.C. §102(b) as allegedly being anticipated by Omichi et al. (U.S. Pat. No. 3,849,166). In view of the amendments to the claims and the remarks made herein this rejection is respectfully traversed as applied and as it may be applied to the pending claims.

Omichi et al. discloses a method for forming a subbing layer on a photographic film by sequentially applying a aqueous solution containing hydrogen peroxide, then applying ultra violet radiation while the coated surface is wet, and then applying a hydrophilic resin solution or a gelatin dispersion containing a solvent or swelting agent (column 1, line 59, to column 2, line 37).

In contrast, the currently amended claims are directed to a method for treating a **backing element comprising a gasket for forming a sealed array assay chamber when joined to a microarray substrate** by either (1) depositing a component on the gasket; (2) extracting a component from the gasket; or (3) surface modifying the gasket to treat the gasket of the microarray structure. Nowhere does the cited reference teach a method of treating a backing element comprising a **gasket** according to the present invention.

Therefore, since the cited reference does not to teach each and every element found in the claims, the cited reference fails to anticipate the claims of the present invention. Accordingly, the Applicants respectfully request that this rejection be withdrawn.

Rejection under 35 U.S.C. §103

Tai et al. (U.S. Pat. No. 6,656,611) (Office Action, page 10)

Claims 5, 7-8, 10-11, 14 have been rejected under 35 U.S.C. §103 as being unpatentable for allegedly being rendered obvious by Tai et al., (U.S. Pat. No. 6,656,611). In view of the remarks made herein this rejection is respectfully traversed as applied and as it may be applied to the pending claims.

The currently amended claims are directed to a method for treating a **backing element comprising a gasket for forming a sealed array assay chamber when joined to a microarray substrate** by either (1) depositing a component on the gasket; (2) extracting a component from the gasket; or (3) surface modifying the gasket to treat the gasket of the microarray structure.

In contrast, Tai et al. discloses a poly-siloxane material that be used to form an insulating structure in an organic light-emitting device (OLED). In addition, the cited reference discloses methods of making OLED by sequential deposition of electrode layers, poly-siloxane layers and organic layers on a substrate surface (column 2, lines 19-63). Nowhere does the cited reference teach a method of treating a backing element comprising a **gasket** according to the present invention.

The law is clear that to establish a prima facie case of obviousness, the prior art reference, or references when combined, must teach or suggest all the claim limitations. *In re Royka*, 180 USPQ 580 (CCPA 1974). As noted above, Tai et al. fails to teach each and every limitation found in the claims of the present application. In particular, Tai et al. fails to teach a method of treating a backing element comprising a **gasket**.

As such, since the cited reference fails to teach each every limitation found in the claims of the present application, the cited reference fails to render the claims of the present application obvious. Therefore, the Applicants respectfully request that this rejection be withdrawn.

Tai et al. in view of Braun et al. (U.S. Pat. No. 5,300,171) or Ishizaka et al (U.S. Pat. No. 4,311,737) (Office Action, page 11)

Claim 15 has been rejected under 35 U.S.C. §103 as being unpatentable for allegedly being rendered obvious by Tai et al., (U.S. Pat. No. 6,656,611) in view of Braun et al. (U.S. Pat. No. 5,300,171) or Ishizaka et al (U.S. Pat. No. 4,311,737). In view of the remarks made herein this rejection is respectfully traversed as applied and as it may be applied to the pending claims.

In order for a cited reference render the claims of the present application obvious, each and every limitation found in the claims must be disclosed in the cited reference. As noted above, Tai et al. fails to teach each and every limitation found in the claims of the present application. In particular, Tai et al. fails to teach a method of treating a backing element comprising a **gasket**. Moreover, since Braun et al. was cited

solely for teaching hydrocarbon liquids and Ishizaka et al. was cited solely for teaching use of an organic solvent, the cited references fails to make up the deficiency of Tai et al. Therefore, the references alone or in combination do not teach each and every element found in the claims.

As such, since the combination of the cited references fails to teach each every limitation found in the claims of the present application, the cited references fails to render the claims of the present application obvious. Therefore, the Applicants respectfully request that this rejection be withdrawn.

Art of Interest

The Office Action has also cited Miklasiewics et al. (U.S. Patent No. 6,326,415) and Watanabe et al (JP 59-89758) as allegedly reading on the broad limitations in the claims (Office Action, page 13).

The currently amended claims are directed to a method for treating a **backing element comprising a gasket for forming a sealed array assay chamber when joined to a microarray substrate** by either (1) depositing a component on the gasket; (2) extracting a component from the gasket; or (3) surface modifying the gasket to treat the gasket of the microarray structure. Nowhere do the references teach a method of treating a backing element comprising a **gasket** according to the present invention. Therefore, the references do not read on the broad limitations in the claims.

Obviousness Type Double Patenting

Holcomb et al. (U.S. Patent No. 6,753,145) (Office Action, page 11)

Claim 1 has been provisionally rejected under the judicially created doctrine of obviousness-type double patenting over Claims 1, 17, 18, or 20 of Holcomb et al. (U.S. Patent No. 6,753,145). This rejection is respectfully traversed as applied and as it may be applied to the pending claims.

The present invention provides a method for treating a **backing element comprising a gasket for forming a sealed array assay chamber when joined to a**

microarray substrate by either (1) depositing a component on the gasket; (2) extracting a component from the gasket; or (3) surface modifying the gasket to treat the gasket of the microarray structure

In contrast, the Holcomb et al is directed to a method for hybridizing microarrays of nucleic acids bound to an adsorbed polymer surface of a siliceous substrate, while preserving the intactness of the adsorbed polymer surface of the array.

As set out in MPEP § 804 (see section II. B. 1.), in determining whether a nonstatutory basis exists for a double patenting rejection, the first question to be asked is - does any claim in the application define an invention that is merely an obvious variation of an invention claimed in the cited patent or application? An "obviousness-type" nonstatutory double patenting rejection might be appropriate only when the answer is "yes". A double patenting rejection of the obviousness-type is "analogous to [a failure to meet] the nonobviousness requirement of 35 U.S.C. § 103" except that the patent principally underlying the double patenting rejection is not considered prior art.¹ Therefore, any analysis employed in an obviousness-type double patenting rejection parallels the guidelines for analysis of a § 103 obviousness determination.²

Moreover, MPEP § 2144.08 (II) states the following:

The patentability of a claim to a specific compound or subgenus embraced by a prior art genus should be analyzed no differently than any other claim for purposes of 35 U.S.C. 103.

...

The fact that a claimed species or subgenus is encompassed by a prior art genus is not sufficient by itself to establish a *prima facie* case of obviousness. *In re Baird*, 16 F.3d 380, 382, 29 USPQ2d 1550, 1552 (Fed. Cir. 1994)

¹ *In re Braithwaite*, 379 F.2d 594, 154 USPQ 29 (CCPA 1967).

² *In re Braat*, 937 F.2d 589, 19 USPQ2d 1289 (Fed. Cir. 1991); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985). As summarized at MPEP § 804, the factual inquiries are as follows:

- (A) Determine the scope and content of a patent claim and the prior art relative to a claim in the application at issue;
- (B) Determine the differences between the scope and content of the patent claim and the prior art as determined in (A) and the claim in the application at issue;
- (C) Determine the level of ordinary skill in the pertinent art; and
- (D) Evaluate any objective indicia of nonobviousness.

The cited reference does not teach a method of treating a backing element comprising a gasket according to the present invention. Therefore, since the cited reference does not teach each and every element found in the claims, the cited reference fails to render the present invention obvious. Accordingly, the Applicants respectfully request that this rejection be withdrawn.

Application No. 09/944,083 (Office Action, page 13)

Claim 1 has been provisionally rejected under the judicially created doctrine of obviousness-type double patenting over Claim 7 of co-pending Application No. 09/944,083. This rejection is respectfully traversed as applied and as it may be applied to the pending claims.

As noted above, the claims of the present application are directed to a method for treating a backing element comprising a gasket for forming a sealed array assay chamber when joined to a microarray substrate by either (1) depositing a component on the gasket; (2) extracting a component from the gasket; or (3) surface modifying the gasket to treat the gasket.

In contrast, co-pending '083 application is directed to a method of producing an array of at least two different polymer ligands covalently attached to a surface of a substrate.

The cited reference does not teach a method of treating a backing element comprising a gasket according to the present invention. Therefore, since the cited reference does not teach each and every element found in the claims, the cited reference fails to render the present invention obvious. Accordingly, the Applicants respectfully request that this rejection be withdrawn.

Application No. 10/005,577 (Office Action, page 13)

Claim 1 has been provisionally rejected under the judicially created doctrine of obviousness-type double patenting over Claim 1, 35, 40, or 49 of co-pending

Application No. 10/005,577. This rejection is respectfully traversed as applied and as it may be applied to the pending claims.

As noted above, the claims of the present application are directed to a method for treating a **backing element comprising a gasket for forming a sealed array assay chamber when joined to a microarray substrate** by either (1) depositing a component on the gasket; (2) extracting a component from the gasket; or (3) surface modifying the gasket to treat the **gasket**.

In contrast, co-pending '577 application is directed to a method for preparing a solid support by contacting a solid support comprising a surface coating having a surface reactive hydroxyl, carboxyl, amino or thiol group with a plurality of monomers, polymerizing the monomers to produce a solid support having a surface tethered polymer having at least one adsorbing moiety, and linking a biomolecule to the polymer via the adsorbing moiety.

The cited reference does not teach a method of treating a backing element comprising a **gasket** according to the present invention. Therefore, since the cited reference does not teach each and every element found in the claims, the cited reference fails to render the present invention obvious. Accordingly, the Applicants respectfully request that this rejection be withdrawn.

Conclusion

The Applicants respectfully submit that all of the claims are in condition for allowance, which action is requested. The Commissioner is hereby authorized to charge any underpayment of fees associated with this communication, including any necessary fees for extensions of time, or credit any overpayment to Deposit Account No. 50-1078.

Respectfully submitted,

Date: April 15, 2005

By: 

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